CALIFORNIA DEPARTMENT OF PARKS AND RECREATION

News Release

FOR IMMEDIATE RELEASE
November 16, 2005

Contact: Brian Cahill
Public Information Officer
California State Parks
760.767.3716

Deborah Knapp
Manager
Anza Borrego Institute
760.767.4063

Anza-Borrego State Park to Host Paleontology Symposium

Fossil Treasures of the Anza-Borrego Desert

What: Two-day science focused program, open to the public

When: November 19-20, 2005

Where: Borrego Springs, California

Who: The Anza-Borrego Institute in cooperation with the Colorado Desert District, California State Parks

Borrego Springs, CA - Southern California's Anza-Borrego Desert State Park® is a vast, mostly arid desert, but these ancient landscapes provide North America's most continuous history of life for most of the last 7 million years—one of the richest, most varied fossil records of its time in the western hemisphere—opening windows onto the region's long-vanished past.

For the last four years, scientists and researchers have collaborated on the first soon-to-be-published book – ***Fossil Treasures of the Anza-Borrego Desert*** - focusing on the fossil prehistory of this unique land. To celebrate the completion of this major work, funded entirely by two generous gifts from an anonymous donor and The San Diego Foundation's Takahashi Family Fund, the Anza-Borrego Institute has invited these leading specialists and scientists to present their theories and discoveries to the general public during this two-day symposium November 19-20 in Borrego Springs.

On Saturday, scientists and researchers will shed light on some of the over 550 types of fossils, plants and animals that have been recovered, varying from microscopic pollen to walrus bones and mammoth skeletons. The fossilized creatures of Anza-Borrego's prehistory, some extinct and some living in the desert today, offer us windows into the past, a detective story of the ages, and a bit of imaginary time travel.

On Sunday, participants will get a first hand look at the fossils and geologic history in the field during day-long expertly guided trips into the desert**.**

This symposium serves as an introduction to a series of field programs over the next year on the fossil prehistory of this region. The intended audience includes scientists,

researchers, teachers, Park personnel, students and the general public.

Register by calling 760.767.4063 a few seats are still available. Academic credit is offered through the UCR Extension, University of California at Riverside and can be arranged by calling Linda Coco at 951.827.5804 or on-line at www.sciences@ucx.ucr.edu.

###

Fossil Treasures of the Anza-Borrego Desert; *A Symposium Exploring North America's Richest Continuous Fossil Record of the Last Seven Million Years*

Program Speakers and Agenda

The Symposium's Saturday agenda features lectures from 15 of the 23 authors of the new book: ***Fossil Treasures of the Anza-Borrego Desert***. This comprehensive work represents decades of research, study and interpretation by leading researchers from across the nation. Participants will have opportunity to meet the speakers during a special book signing at the Park Visitor Center.

The program follows the general order of the chapters in the book beginning with the history of collections in the Park, then explores the individual groups of animals and ends with an overview of paleoclimates and environmental change in the Anza-Borrego desert region. Following introductions by District Paleontologist **George Jefferson**, **Barbara Marrs,** a researcher and photographer with Creative Imaging Photography, will begin the program with an overview of the history of Colorado Desert District's fossil collections. This story ranges from William Blake's pioneering work before the Civil War to today's state-of-the-art paleontology Stout Research Center, and the extensive human resources including professional staff, certified volunteers, and visiting academics that have made this story possible. They, along with readers and students of paleontology, are time-travelers of a sort, engaged in an exciting detective story of the ages.

Former Park Ranger/ paleontologist/geologist **Paul Remeika** will shift the story to Anza-Borrego's geographic and climatic setting within Colorado River watershed. Plant pollens and freshwater protozoans, eroded from Mesozoic formations that were deposited on the Colorado Plateau during the time of the Dinosaurs, are found in the eastern badlands of Anza-Borrego. These are evidence that the ancestral Colorado River began its work of carving out the Grand Canyon some 4 million years ago. Fossil plants and woods, similar to those that grow along California's central coast today, tell of a wetter, cooler climatic regime than in today's desert.

University of Oregon Professor **Rebecca Dorsey** will continue by reviewing the physical setting and the last 25 million years of geological development of the region in stratigraphy, tectonics, and basin evolution. **Michael Cassiliano**, Collections Manager for the Department of Geology and Geophysics at the University of Wyoming, will explore the relative dating methods of mammalian biostratigraphy to the rich fossil record of the badlands of Vallecito Creek and Fish Creek basins.

Having developed the background stage to understand the paleontologic drama of the Anza-Borrego Desert region, researchers will tell the story of individual groups of animals. **Philip Gensler**, paleontologist with the US National Park Service at the Hageran Fossil Bed Monument, and San Diego Natural History Researcher **Mark Roeder** will shed light on the fish amphibians and reptiles that lived in the region following the retreat of the Imperial Sea some 4.5 million years ago. The fish, all from the Colorado River drainage system, corroborate the role of this great river in contributing to the Anza-Borrego landscape. Here, the diversity of fossil reptilian taxa is one of the richest of its time in North America.

Christopher Shaw, Collection Manager at George C. Page Museum of La Brea Discoveries, will talk about the large Anza-Borrego carnivores, including the sabertooth cat. Dogs, cats, badgers, skunks, raccoons, and other small carnivorans will be reviewed by University of Texas Doctoral Candidate **Lyndon Murray**. Interestingly, today's most feared and respected local carnivoran, the cougar or mountain lion, is more closely related to the smaller cats than to the sabertooth and North American cheetah-like cats from Anza-Borrego's past.

The themes of adaptation, evolution and extinction, and the influences of changing environments on the animals and landscapes, will be explored during the discussion about horses and their relatives by San Bernardino County Museum, Department of Geological Sciences Curator **Eric Scott** and Anza-Borrego's extinct camels and llamas by **Kesler Randall**, San Diego Natural History Museum Paleontology Collections Manager.

University of California Davis Professor **Howie Spero** will conclude the afternoon with a discussion about changes in the climate through time. He will explain how chemical analyses of the carbon and oxygen isotopes extracted from fossil horse teeth can be used to track major climatic changes within the record and the types of plants that the animals ate.

The Saturday evening program will feature a special presentation by **Thomas Deméré**, Curator of Paleontology at the San Diego Natural History Museum. During his talk *"The Imperial Sea: Marine Geology and Paleontology*", Deméré will focus on the late Miocene age, 6 million year old ancestral Gulf of California and the rich shellfish fauna it supported. Predating the formation of the Isthmus of Panama, these warm tropical waters, fed by a branch of the western Atlantic Gulf Stream, hosted animals which were more closely related to Caribbean forms than to those in the eastern Pacific.

The Sunday field trips will include day-long guided tours by these specialists to the Coyote Badlands, Vallecito Creek Badlands, Font's Point, Split Mountain and other locations in the Park. Two tours, a trip to the Paleontology Laboratory and a Visitor Center lecture on the excavation of a mammoth by paleontologist George McDaniel, will be wheelchair accessible.

The Book *Fossil Treasures of the Anza-Borrego Desert*

Anza-Borrego's rich fossil history has been the focus of ongoing research, study, and interpretation since the mid-1850s. The results of the past several decades of study by leading researchers from across the nation is now available in this comprehensive work, a compilation of 23 authors each with their own specialty.

Early chapters explore background themes and concepts before raising the curtain on Anza-Borrego's last seven million years, starting with the Imperial Sea episode. Central chapters present the real stars of the story—individual groups of animals. The bestiary reads like a who's-who of many of the most unique fossil vertebrates of their time—bathtub-sized tortoises, the sabertooth cat, giant ground sloths, the giant short-faced bear, the largest known mammoth, a giant camel, and the largest flying bird ever to fly northern hemisphere skies. Closing chapters discuss fossil footprints, intercontinental connections, and paleoclimates and environmental change in the Anza-Borrego Desert region.

Exquisite illustrations and color foldout paleolandscapes bring the past to life throughout the text. The book is edited by George T. Jefferson, California State Park District paleontologist, and Lowell Lindsay, publisher and board member of the Association of Earth Science Editors.

The book will be offered for $39.95 and can be purchased on-line @www.theabf.org beginning November 1, 2005. Discounts are available for Anza-Borrego Foundation members and Anza-Borrego Desert State Park® volunteers.

# # #